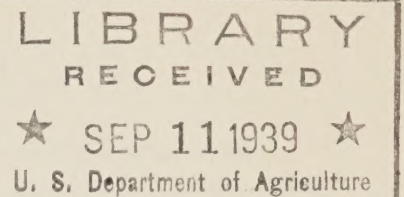


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DISCUSSION ON THE BOXELDER BUG

The following discussion has been prepared for the purpose of answering inquiries regarding the boxelder bug (Leptocoris trivittatus Say). It mentions briefly the habits of the insect and summarizes various measures that have been suggested for control.

The boxelder bug feeds principally on boxelder trees (ashleaf maple) during the summer, sucking the juices from the leaves and seeds. It has also been observed occasionally on maple and ash, and when extremely numerous may feed to some extent on the developing fruit of fruit trees and on other plants. By fall the insects are full grown and begin to seek sheltered or warm places to spend the winter. This is the reason for their appearance around houses and other buildings, and they are often found congregated in large numbers on warm exposures. While the insects do no damage and are harmless at this time, they frequently find their way into buildings and become very annoying because of their presence. In the spring they leave their places of hibernation and fly to the boxelder trees where they deposit their eggs, thus starting a new generation.

There are several measures that might be employed to reduce the abundance of the boxelder bug. Advantage may be taken of the habit which the insects have of clustering together in warm situations during the fall, and great masses of them destroyed. The clustered bugs can be brushed into a vessel containing oil, or water covered with a thick layer of kerosene or other oil, or swept from the sides of buildings or other objects and crushed. Where they occur on objects not adjacent to living plants, which would not be damaged or marred, they can be sprayed with kerosene, or boiling water or oil can be poured over them.

Spraying these full grown insects with one of the commercial pyrethrum sprays, mixed at about three times the strength recommended by the manufacturer for the control of aphids, should be effective. A 10 percent kerosene emulsion could also be tried, and is prepared as follows: Dissolve 1/4 pound of laundry soap or soap flakes in 2 quarts of hot water, then churn into this solution, while hot, 1 gallon of kerosene by stirring vigorously. When a creamy emulsion is obtained add 8-1/2 gallons of water. Keep this solution well mixed when applying as a spray. Either of these two sprays could probably be used safely on the trunks of the trees in late summer or early fall when bugs of various sizes are observed wandering up and down the trees, however, the insects would have to be wetted by the spray solution to kill them. If applied to the foliage, these sprays would possibly cause some injury to the leaves.

The young, bright red nymphs, with only partially developed wings, are more susceptible to contact insecticides, and spraying heavily infested trees once or twice in May or early June would be another means of control. A pyrethrum spray, at the strength recommended by the manufacturer for the control of other plant bugs should be fairly effective against the young boxelder bugs at this time and safe to use on the trees. A nicotine sulphate and soap solution, using about one and one half times the amount of nicotine recommended for aphid control, is sometimes suggested for this purpose, but the results with nicotine sulphate seem to vary considerably. The under sides of the leaves should be covered by the spray since the nymphs occur largely on this surface and the insects must be wet by these sprays or they will not be killed. Poison sprays, such as lead arsenate, would be of no value because this insect feeds entirely by sucking and could not eat the poison.

Where the insects invade houses in considerable numbers it is likely that many of them could be killed by liberal applications of the common household or fly sprays, especially those sprays containing pyrethrum. If the insects are only paralyzed temporarily by these sprays they could be swept up and destroyed before they recover.

Apparently the boxelder bug becomes a nuisance primarily in localities where boxelder trees are grown. It appears, therefore, that the elimination of boxelder trees, and replacing them with more suitable varieties, would be one method of getting rid of the pest, if it could not be controlled by other means. Some observations indicate that the insect may confine its feeding largely to the female or seed-bearing boxelder trees, evidently preferring to feed on the succulent seeds or fruit. Planting or retaining only the male or staminate trees, which bear no seeds, might be a means of reducing the pest, although the results from such a procedure have not been tested.

When this insect is present in moderate numbers it frequently causes little or no injury to the trees; however, when the pest is abnormally abundant the leaves may be severely damaged as a result of heavy feeding and the trees thus weakened. The adults of the boxelder bug can be distinguished by their size and color. They are somewhat flattened and elongate, and approximately one half inch in length. The general color from above is dark brown to black with red markings. The thorax, just back of the head, is marked with three longitudinal, narrow, red lines, one down the center and one along each edge. The basal half of the wings is partly margined with red, and the abdomen under the wings is bright red in color. Before the bugs are full grown the head, thorax, legs and wing pads are dark in color, while the remainder of the body is bright red.

L. G. Baunhofer
Associate Entomologist
Forest Insect Investigations

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